

Method of Forming Silicon-On-Insulator Wafers Having Process Resistant Applications

Abstract

Disclosed herein is a method of providing improved electrical isolation in a separation by ion implanted oxide (SIMOX) process of making an SOI wafer. The method includes implanting ions into a substrate in a base dose implant conducted at a first energy level, implanting ions into the substrate at a second energy level in a second implant while the substrate is held at room temperature, and annealing the substrate to cause the implanted ions to be redistributed throughout the buried oxide (BOX) layer of the SOI wafer.